

(2) In the Specification, page 4, lines 24 to 29, delete "For reducing .....inspection aptitude."

(3) In the Specification, page 5, lines 28 to 34, "A can used ..... test aptitude." amend as follow.

" A can according to the present invention comprises a can for low positive pressure canned food having an internal pressure inspection aptitude in which contents are filled and sealed so that can internal pressure assumes at least a low positive pressure state with respect to the outside atmospheric pressure, characterized in that the body and a bottom are seamlessly molded integrally, said bottom has an annular ground portion (3, 11, 21, 26, 31) of which ground diameter is 70 to 90% of that of the body in the vicinity of an outer peripheral portion, the inside of said annular ground portion constitutes an internal rising wall (4, 12, 22) which rises inwardly of the can, said internal rising wall being internally formed with a bottom wall (6, 14, 27, 34) having a substantially flat shape and a height of 0.5 to 6 mm from the ground surface, and the bottom of the internal rising wall (4, 12, 22) of said annular ground portion is formed to be projected with an annular bead (5, 13, 16, 23, 32) having a depth of 0.1 to 4 mm inwardly of the can from the surface of said bottom wall so as to have an internal pressure inspection aptitude."

(4) Amend Claim 1 as follow.

" A low positive pressure canned food having an internal pressure inspection aptitude in which contents are filled and sealed in the seamless can having the body and a bottom thereof molded integrally so that can internal pressure assumes at least a low positive pressure state with respect to the outside atmospheric pressure, characterized in that the can internal pressure is in a range of from 0.2 to 0.8 kgf/cm<sup>2</sup> at room temperature, the bottom of said seamless can has an annular ground portion of which ground diameter is 70 to 90% of that of the can in the vicinity of an outer peripheral portion, the inside of said annular ground portion constitutes an internal rising wall which rises inwardly of the can, said internal rising wall being internally formed with a bottom wall having a substantially flat shape and a height of 0.5 to 6 mm from the ground surface, and the bottom of the internal rising wall of said annular ground portion is formed with an annular bead having a depth of 0.1 to 4 mm inwardly of the can from the surface of said bottom wall so as to have an internal pressure inspection aptitude.

"

(5) Amend Claim 10 as follow.

"10. A can for low positive pressure canned food having an internal pressure

inspection aptitude in which contents are filled and sealed so that can internal pressure assumes at least a low positive pressure state with respect to the outside atmospheric pressure, characterized in that the body and a bottom are seamlessly molded integrally, said bottom has an annular ground portion (3, 11, 21, 26, 31) of which ground diameter is 70 to 90% of that of the body in the vicinity of an outer peripheral portion, the inside of said annular ground portion constitutes an internal rising wall (4, 12, 22) which rises inwardly of the can, said internal rising wall being internally formed with a bottom wall (6, 14, 27, 34) having a substantially flat shape and a height of 0.5 to 6 mm from the ground surface, and the bottom of the internal rising wall (4, 12, 22) of said annular ground portion is formed to be projected with an annular bead (5, 13, 16, 23, 32) having a depth of 0.1 to 4 mm inwardly of the can from the surface of said bottom wall so as to have an internal pressure inspection aptitude."

(6) Amend Claims 12 to 15 as follow.

"12. The can according to claim 10, wherein a diameter of a flat portion of the bottom is 60% to 90% with respect to said ground diameter.

13. The can according to claim 10 or 12, wherein an angle of inclination of said internal rising wall (4,12,22) is 65° to 110° .

14. The can according to claim 10 or 12, wherein said annular bead (5, 13, 16, 23, 32) has a gradually inclined portion continuous to the bottom wall from the top thereof.

15. A low positive pressure can according to claim 10 or 12, wherein a wall thickness of the bottom is 0.15 to 0.25 mm in case of steel material and 0.25 to 0.35 mm in case of aluminum material."

(7) Delete Claims 3, 4 and 11.

the time of retort processing, and can make container materials thin to reduce the cost of cans.

For solving the aforementioned problem, the present invention provides a low positive pressure canned food having an internal pressure inspection aptitude in which contents are filled and sealed in the seamless can having the body and a bottom thereof molded integrally so that can internal pressure assumes at least a low positive pressure state with respect to the outside atmospheric pressure, characterized in that the can internal pressure is in a range of from 0.2 to 0.8 kgf/cm<sup>2</sup> at room temperature, the bottom of said seamless can has an annular ground portion of which ground diameter is 70 to 90% of that of the can in the vicinity of an outer peripheral portion, the inside of said annular ground portion constitutes an internal rising wall which rises inwardly of the can, said internal rising wall being internally formed with a bottom wall having a substantially flat shape and a height of 0.5 to 6 mm from the ground surface, and the bottom of the internal rising wall of said annular ground portion is formed with an annular bead having a depth of 0.1 to 4 mm inwardly of the can from the surface of said bottom wall so as to have an internal pressure inspection aptitude. Preferably the can internal pressure is that in a range of set internal pressure of from 0.2 to 0.8 kgf/cm<sup>2</sup>, dispersion is  $\pm 0.2$  kgf/cm<sup>2</sup> or less, preferably,  $\pm 0.1$  kgf/cm<sup>2</sup> or less. When the dispersion is  $\pm 0.2$  kgf/cm<sup>2</sup> or large, reliability of detection of a fine change in internal pressure caused by a fine leakage or spoiling becomes low, which is not preferable. It is noted that the internal pressure inspection aptitude termed herein refers to the performance in which for example, in the case where internal pressure inspection is carried out by tap test, resplendence of sounds (frequency) generated by striking is good even with respect to a fine change in can internal pressure; in the case where internal pressure inspection is carried out by measuring a displacement of an outer circumferential portion of canned food by means of a displacement meter, responsiveness of displacement of a measured part with respect to a fine change in can internal pressure is good; and in the case where a measured part of an outer circumferential portion of canned food is pressed by the fixed pressure to measure reaction thereof thereby carrying out internal pressure inspection, resplendence of reaction is good with respect to a fine change in can internal pressure so that internal pressure can be measured accurately.

The aforementioned range of the can internal pressure from 0.2 to 0.8 kgf/cm<sup>2</sup>, preferably 0.2 to 0.6 kgf/cm<sup>2</sup> has been confirmed as the range in which as shown in a graph of FIG. 5, in tap test, the rate (inclination) of vibration frequency of the bottom to the change in can internal pressure is so large that the vibration frequency greatly changes with respect to a slight change in internal pressure, and measurement of can internal

pressure can be well detected. This range is in a positive pressure state corresponding to a vacuum degree of a negative pressure can, and it means that tap test can be made with the same accuracy as the tap test for a negative pressure can. If the can internal pressure is out of the above range, a change in vibration frequency with respect to a change in can internal pressure is small, resulting in inferior judgement. Further, when the can internal pressure is higher than  $0.8 \text{ kgf/cm}^2$ , in the case of canned food subject to retort processing, a pressure difference between inside and outside of a can becomes too high at the time of retort processing, and in the bottom shape provided with the substantially flat as described above, a can material should be increased in thickness to maintain pressure resistance and the internal pressure inspection aptitude is deteriorated. Further, in the case where within the range of the can internal pressure, a displacement amount of a lid and a bottom or the body is measured by a change in can internal pressure to carry out internal pressure inspection, there is a good internal pressure inspection aptitude except the dome-shaped bottom having a high form rigidity, but in can internal pressure which is lower than  $0.2 \text{ kgf/cm}^2$  which is out of the above range of can internal pressure, judgement of sealing guarantee is insufficient, and in the range of can internal pressure higher than  $0.8 \text{ kgf/cm}^2$ , the rigidity of a can increases so that a changing amount of displacement is small, thus making it difficult to perform accurate internal pressure inspection.

In the positive pressure canned food, the contents and the canned food making method are not particularly limited but can be suitably applied to those in which the contents comprise low acid drinks, which are sealed in positive pressure by the gas exchange method and subjected to retort sterilization processing after filling and sealing, any one of the bottom, body, and the lid has the internal pressure inspection aptitude. The gas exchange method termed herein includes not only the case where an inert gas such as nitrogen gas is blown into a head space for substitution but also the case where a liquefied gas such as liquid nitrogen or a solidified gas such as dry ice is filled in a can, and positive pressure is generated in the can by a vaporization swell thereof.

A can according to the present invention comprises a can for low positive pressure canned food having an internal pressure inspection aptitude in which contents are filled and sealed so that can internal pressure assumes at least a low positive pressure state with respect to the outside atmospheric pressure, characterized in that the body and a bottom are seamlessly molded integrally, said bottom has an annular ground portion (3, 11, 21, 26, 31) of which ground diameter is 70 to 90% of that of the body in the vicinity of an outer peripheral portion, the inside of said annular ground portion constitutes an internal rising wall (4, 12, 22) which rises

inwardly of the can, said internal rising wall being internally formed with a bottom wall (6, 14, 27, 34) having a substantially flat shape and a height of 0.5 to 6 mm from the ground surface, and the bottom of the internal rising wall (4, 12, 22) of said annular ground portion is formed to be projected with an annular bead (5, 13, 16, 23, 32) having a depth of 0.1 to 4 mm inwardly of the can from the surface of said bottom wall so as to have an internal pressure inspection aptitude.